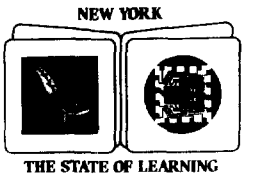
CC Docket #96-45



THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234

EXECUTIVE DEPUTY COMMISSIONER OF EDUCATION
THE NEW YORK STATE EDUCATION DEPARTMENT
ALBANY, NEW YORK 12234

April 11, 1996

Office of the Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, DC 20554

Dear Secretary:

On behalf of the New York State Board of Regents and the State Education Department (SED), I thank you for the opportunity to comment on the notice of proposed rulemaking on universal service in the March 14, 1996 Federal Register.

The Board of Regents sets educational policy for New York State and governs the University of the State of New York, the nation's most comprehensive and unified educational system. It includes over 7,000 public and private elementary and secondary schools, 248 public and private colleges and universities, 251 proprietary (for-profit) schools, nearly 7,000 libraries, 750 museums, and 25 public broadcasting facilities. The SED is the Board's operating arm.

To facilitate affordable and equitable access to telecommunications-based resources and information services, a vital priority for the education and research community in New York State, the Regents have:

- Created an Office of Telecommunications Policy Analysis and Development to focus on state and Federal technology policy issues that could improve educational results for all learners, improve access to information for citizens, and enhance the state's economic development;
- Carried out substantial dialogue with the State's educational leadership, technology industries, and state and local government leaders on the use of information and telecommunications technologies for improving educational results and increasing access to information. In linking institutions through interoperable, broadband telecommunications networks, the Regents intend to create an "electronic learning community" (portrayed graphically in Attachment A) to improve learning in schools, colleges, universities, libraries, and private industry and to enhance the equitable access of citizens to important information resources;
- Developed a major legislative proposal, the Omnibus Technology in Education act of 1996, to provide network access for every educational, research, and cultural institution in the State (Attachment B summarizes the major provisions);
- Established a strategy for working with the private sector, which advocates for the

full deployment of network services and management of networks by private sector providers. To take advantage of the private sector deployment and management of networks and related services, it was decided that the education community must aggregate its purchasing power of about 10,000 geographically dispersed sites. This community represents the largest market beyond the residential market for all telecommunications providers and the largest market volume for future use of broadband services. We anticipate that this aggregate purchasing power, if properly articulated, will have substantial impact on market pricing for all telecommunications services. (Attachment C describes the entire educational market); and

- Articulated a regulatory strategy that unites all these factors and makes them consistent with Federal and state telecommunications policy (Attachment D contains five letters the Department sent to the New York State Public Service Commission outlining our positions.)

Underscoring these technical recommendations, however, has been our emphasis on three primary regulatory policy issues: lower prices, universal access for all educational institutions, and an evolving, scalable telecommunications infrastructure that supports "advanced" telecommunications applications. In this regard, the Department has embraced the principle that the most efficient way to lower rates, create more services, and improve access is through increased competition.

As a culmination of its work on state regulatory policy, in February, we hosted a two-day policy forum on *Assuring Full and Equitable Access to Telecommunications Networks and Technology for Education and Research*. The central purpose of the Forum was to determine how New York State could develop a universal access policy that is appropriate for education, research, and cultural institutions in an era of deregulation and increasing market competition. Participants were able to: 1) discuss the implications for education and research of ubiquitous, affordable access to broadband telecommunications capacities; 2) gain a perspective on the telecommunications industry's strategies for providing broadband access and supporting the needs of the education and research communities; and 3) discuss with state and Federal regulatory agencies the public interest issues related to ensuring affordable access to broadband telecommunications networks and services.

Then, on March 29, we hosted a one-day *Universal Access* forum with state education agencies from several northeast and central Atlantic states to: 1) identify and compare the commonalities and priorities of each state's regulatory policies vis a vis education; and 2) develop a preliminary joint statement to the Federal Communication Commission (FCC) on the implementation of the universal service provisions in the Telecommunications Act of 1996. All attenders agreed that SED staff would draft the statement to reflect the position of all the states. Attachment E lists the organizations.

COMMENTS AND RECOMMENDATIONS

Note: we intend to provide more detailed comments during the Reply phase of this proceeding on the assessment of the technical and economic feasibility of providing access to "advanced" services, designation of service levels, the sufficiency and predictability of support mechanisms, and the circumstances under which carriers may be required to connect its services to public institutional networks. A comprehensive analysis of testimony by other respondents during the Comment phase of the proceeding and their comparison to pending State legislation will be required to fully develop positions in these and other areas outlined in the Notice.

I. Introduction - We have no comments on these sections.

II. Goals and Principles of Universal Service Support Mechanisms

DISCUSSION

The Telecommunications Act of 1996 makes an effort to differentiate between "special" services that could be provided to schools, libraries and health care providers within the general definition of universal service [Section 254 (c) (3)] and those that should be considered as "advanced" telecommunications services [Section 254 (b) (6)], access to which is considered to be a fundamental principle for furthering universal service (including "elementary and secondary schools and classrooms, health care providers, and libraries...")

The language suggests that "special" services will not be defined within the universal service designation as "advanced" services. That is, the types of services designated as "special" services will be those capable of being supported by a standard telephony infrastructure (using standard voice-grade lines and telephony signaling and switching). Examples of services that might be considered are voice messaging, modem access to computer networks or other electronic media, and certain teleconferencing services. Access to, and use of, these services would be subject to the development of specific support mechanisms that would result in discount pricing for educational organizations and health care providers. Further, the difference between the discount price of these services and the retail price of these services could be recovered from other classifications of rate payers by the companies providing these services.

"Advanced" services do not appear to be eligible for discount pricing for **use**. Instead, discounting may only be available for installation of networks to permit access to services. That is, the cost of providing access to an ISDN-based service for schools would be discounted but not the actual cost for using the service. The current law also only calls for development of "competitively neutral" rules to enhance access to "advanced" services. This seems to mean that there is no provision for ensuring access to "advanced" services or for ensuring interconnection of "advanced" services among companies.

Moreover, there appears to be some inconsistency in the discussion of these services as presented in the Notice (Paragraph 11) and the discussion in the Conference Report accompanying the new Act (pages 132-133). A literal interpretation of the language of Section 254 of the law (universal service) seems to be closer in intent to the discussion in the Conference Report than it is in the Notice. The language of the Notice seems to suggest that both "additional" and "advanced" services are categories for which Federal support mechanisms will need to be established to "obtain access" (Paragraph 11 of the Notice). The Conference Report, by contrast, appears to indicate that subsidies should be established for both "special" and "advanced" services for both access **and** use of these services. We support the Conference Report interpretation.

While we enthusiastically support the intent of the law to begin offering more telecommunications-based services to educational institutions, we are concerned that the current language - at least in terms of the universal support mechanisms - places too much emphasis on narrow-band services. This lack of specificity and legislative intent to promote **assurance** of affordable access to, and subsidy for use of, "advanced" services creates a significant challenge for the establishment of an interconnected, interoperable electronic learning community. As stated above, the Regents have established, as a matter of policy and priority, the full use of technology and telecommunications for improving educational results and for promoting efficiencies in delivering quality learning and information services. The achievement of this goal is predicated on the use of high capacity telecommunications networks currently offered or under development by the State's telecommunications providers that will support applications requiring the transport of information at high speeds and at high volume.

RECOMMENDATIONS

- The Joint Board should clarify which services will be subject to discount pricing for both access and use and which will be subject for access only. This clarification will be critical for determining whether the establishment of a universal service funding mechanism will benefit educational organizations and libraries, especially since the magnitude of the resources that may need to be contributed by providers has a substantial impact on other classes of ratepayers.
- It also may be important to strengthen requirements for ensuring access to "advanced" services for educational organizations, especially as it relates to subsidizing the provisioning of networks for this purpose. The actual cost of use of these networks may best be controlled, as implied in the current language of the Act, through fair market competition. The deliberations of the Joint Board should reflect this balance between the protection of the public's interest in gaining equitable access to "advanced" services and the recognition of the economic interests of the telecommunications industry to build these capacities. The long-term interests of educational organizations, including libraries, will not be served by the establishment of a universal service mechanism that impedes the economic incentive to build increasingly powerful networks or that passes the costs

of network development along to other classes of users. In fact, we have built our regulatory strategy and legislative proposal on our ability to present an aggregate market to the telecommunications providers as a means for effecting long-term reductions in pricing for network access and use. However, the development of requirements in the Act's universal service provisions to ensure access to and the interconnection of "advanced" services will -- and should -- add leverage to the State's negotiations with telecommunications providers for affordable, high quality services. As such, any new language on support mechanisms should be clear in how it conforms to the underlying principle of the Act to provide for a pro-competitive, deregulated national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies to all Americans.

- Any cross-subsidization policies at the Federal level should be constructed so that they provide maximum flexibility for states. That is, it is hoped that states will have the regulatory freedom to set complementary price structures on "advanced" services, for example, that would be consistent with any Federal discounts on "core" or "special" services.
- Under any scenario, it seems prudent to adopt a principle of moderation in terms of contributions to the universal service fund. The goal should be to minimize the impact on other classes of ratepayers because of the possible perception that the preferential treatment of educational organizations and other government agencies constitutes another form of taxation. Further, the moderation of fund contributions will give telecommunications providers more incentive to compete for the business of educational organizations and libraries, especially if the cost of use of "advanced" services will not be considered for subsidy. Educational institutions, in particular, should gain lower rates and more services if there is more market competition. Any cross-subsidization tends to obscure real price reductions and other benefits.

III. Support for Rural, Insular, and High-Cost Areas and Low-Income Consumers

DISCUSSION

The Notice's emphasis on equity for consumers in these areas is essential. The Board of Regents has a long history of concern with structural disparities of resources among educational institutions and their students. Networked resources with strict equitable access policies could redress inequities that have been developing since the Communication Act of 1934. We endorse the intent of the Act to ensure that telecommunications users in rural, insular, and high cost areas have access to services, including "interexchange services and advanced services that are reasonably comparable" to those services in urban areas.

RECOMMENDATIONS

- We have no specific recommendations. We plan, however, to review several of the technical proposals currently being developed by other organizations and will have specific comments on them for the May 7 submission.

IV. Schools, Libraries, and Health Care Providers

DISCUSSION

The New York State Education Department applauds congressional recognition of the importance of telecommunications and information services to educational institutions and rural health care providers. As discussed earlier, New York State's educational leadership has established as a matter of policy the assurance of universal access to "advanced" services as a modality for the creation of an electronic learning community that will provide educational and information services to all of the State's citizens on an equitable and cost effective basis. This State policy is consistent with, but broader in scope, than congressional intent because New York's vision includes colleges, universities, museums, and other cultural institutions in addition to schools and libraries. We therefore think extending the policy of universal access to all members of the educational delivery system will encourage a greater diversity and quality of learning resources and opportunities. Moreover, the inclusion of more eligible institutions will provide a greater incentive to telecommunications providers to provision networks for "advanced" services because a larger aggregate market using common operating standards and protocols can be served more efficiently.

While congressional intent is clear with respect to assisting schools and libraries in obtaining access to advanced telecommunications (Paragraph 72) we would like to make note once again of a seeming inconsistency in the language used to prescribe the Joint Commission's responsibility for defining "additional, special services" designated for universal support and those to be designated as "advanced" services for which access is to be "enhanced" (Paragraph 71). The important issue that needs to be addressed through additional clarifying language is whether or not Congress intended to ensure access to "advanced" services and whether or not that access, and possibly use, were intended to be subsidized by some form of Federal support mechanism.

Further, the discussion presented at the beginning of paragraph 77 of the Notice sets the bar for what is considered to be the minimum set of services that should be considered for discount pricing pursuant to universal service provisions. These services, as indicated earlier, appear to be only those that are supported by standard voice grade lines and telephony signaling and switching. As such none of the "additional services" referenced here, or referenced elsewhere as "special" services, can be considered to be "advanced" services.

In this context, comments and recommendations requested in paragraph 78 regarding the types of additional services that carriers must make available to schools and libraries under Section 254(h)(1)(B) will not adequately represent reasonable capacities for most educational organizations who wish to make effective use of technology and telecommunications for learning, teaching, and information access. Further, the discussions presented as footnotes to paragraphs 79 and 80 present a rather misleading context for specifying additional services.

In no way should the provision of World Wide Web Internet access via a single local loop voice grade line at 28.8 kbps be considered as adequate for use in an instructional setting. In all likelihood, the effective use of telecommunications and networking for achieving priority educational objectives will require the provisioning of networks to support "advanced" services.

We also want to note that while no part of the educational system is ready to use all of the "advanced" services that could be built, many institutions are already using these capacities and applications are growing rapidly. The implications of the widely varying levels of technology and telecommunications services being used is significant for two major reasons.

First, it means that the definitions and associated mechanisms for price support for all services should be made cautiously and judiciously. The nature of technology use in education and research institutions will require access to more bandwidth over time. This means that the establishment of discrete service levels gives the false impression that bandwidth needs are static. In reality, technologies, services, and functionalities are constantly evolving. We therefore argue that the focus of support mechanisms for service levels should be on the concepts of "bandwidth on demand" and a scalable telecommunications infrastructure. Defining "core," "special," and "advanced" services too rigidly could inhibit the evolutionary process of the network and its services.

Our second concern is that the labeling and financing of certain service levels could cause schools and libraries to plan and design educational programs around short-term, restrictive service levels. Educators, librarians, and other policymakers should always be in a position to assume that educational network capacities are scalable. In short, applications and use should drive the development of the network, not artificially imposed service levels and support mechanisms.

RECOMMENDATIONS

- The Joint Board should consider extending the provisions of universal service to colleges, universities, museums, and other appropriate cultural institutions. Incidentally, it should be noted that the inclusion of these additional institutions should have a minimal impact on the Universal Services Fund because they represent a small minority (6 - 7 percent in New York State) of the total number

of education and research institutions.

- o Given the increasing reliance of schools and libraries on broadband services (which would be defined as "advanced" services in any context), we strongly recommend that the Joint Commission recognize the assurance of access to "advanced" services as an essential component of universal service. Additional flexibility, however, must be introduced into discount pricing methodologies that will be needed to ensure access (and use) to "advanced" services at affordable rates. This issue will be addressed in section V.
- o Other services that should be made available to schools and libraries using standard voice grade lines should include, but not be limited to:
  - Internet access via local loop interconnection to an Internet service provider. This connection should not require schools or libraries to incur long distance or interexchange access charges for gaining access.
  - Voice Messaging and electronic mail capability.
  - Multiplexing capability to permit distribution of multiple local loop connections to a variety of sites (e.g. classrooms) within a single facility.

  The facilities required to provide these functionalities would not appear to be different than those required to support regular telephony, except that central office switching facilities would have to be augmented with respect to the number of ports that would be required to handle the increased traffic associated with the use of these services. It would be highly desirable, however, to operate these types of services within a digital transport environment (as opposed to analog) to optimize the capability to interconnect with other users.
- o Advances in telecommunications and information technologies need to be continually evaluated at least once every other year to determine which future services may have relevance to schools and libraries. For example, recent developments in compression technologies will have significant implications for the transport of visual images in digital formats via standard telephone lines. These technologies, while still in their infancy, already have substantial value for teaching and information access.
- o With respect to seeking comments on whether "wireless technologies" may provide a more efficient way of delivering services designated for support, the principle of a "network of networks" should prevail. As competition and the maturation of technologies in local exchange, long distance, and cellular markets continue to grow, the number of comparable options made available to consumers will also continue to grow. In both respects wireless technologies are emerging as viable options and supplements to traditional ground-based telecommunications capacities. It may not be as important to consider whether wireless technologies are more or less efficient for the delivery of service as it is to consider how these technologies will complement the others currently in use.
- o In formulating a discount methodology for universal service, support mechanisms will be heavily influenced by current industry cost and pricing regimes and by flexibility introduced through changes in the regulatory structure to encourage competition. There are several dimensions related to the use of networks by

schools and libraries, however, that may need to be explored. First, schools and libraries generally operate under the same tariff provisions as businesses. These tariffs are generally higher than those for residential customers (at least for local exchange providers) and justified, in part, as an accommodation to the maintenance of lower prices for the latter. Consideration should be given to using the incremental portion of the business rates for services used to subsidize residential rates as an offset to rates charged to schools and libraries. Second, telecommunications providers should be required to monitor the usage of "additional" services by schools and libraries to determine if discount rate structures have resulted in increased use. A portion of the increased company revenues derived from the use of these services could be "shared" with other classifications of rate payers by returning a portion of these revenues to the universal services fund. This "revenue sharing" would help ease the perception that other classes of ratepayers are subsidizing lower rates for schools and libraries. Third, regardless of the strategies used to formulate a discount methodology, the principle of incremental pricing should prevail when establishing the cost basis for providing services via the universal service fund.

- Additional consideration should be given to achieving reduced rates for services using an aggregated market approach. If companies were required to work with schools and libraries en masse to determine which services could be provisioned for all organizations, or to define minimum capacity requirements for "advanced" services, the companies may possibly incur lower network design, development, and marketing costs. The savings that could accrue to the companies could, in turn, be passed on to these institutions in the form of reduced pricing. This approach, if considered useful, should be fully developed through a collaborative proceeding between the telecommunications providers and schools, libraries, and rural health care providers.
- With respect to reselling of services made available to schools and libraries via support from the universal service fund (Paragraphs 84 and 86), careful consideration must be given to the provisioning of certain services such as Internet access. Many schools and libraries obtain Internet access through "down streaming" from other educational organizations who partition out unused capacity. The cost of access is often apportioned to the agencies that share the service. In many cases, the lead organization allowed to share Internet services is a postsecondary institution, which is precluded from eligibility for universal service support under the current provisions of the Telecommunications Act. Clearly, accommodations must be made within the provisions established by the Joint Board to allow this type of cost sharing or "reselling" to occur. In addition, the implications of the prohibition against resale need to be addressed with respect to the provisioning of Internet services by non-profit organizations. In some instances, an Internet service provider (ISP), for example, is classified as a non-profit organization -- which may or may not be operating as a bona fide educational organization.

o Paragraph 85 seeks comments and recommendations on ways to determine whether a service requested from a telecommunications provider by a school or library is "bona fide" request. We recommend that the Joint Board consider the establishment of a committee composed primarily of technology-using educators and librarians to review the types of requests for service that are received from schools and libraries. The objective here is to ensure that requests received can be assessed with respect to their purpose and value for supporting learning and information access. In many respects, the types of service requested may not be clearly understood if analyzed only with respect to their technical viability.

V. Enhancing Access to "Advanced" Services for Schools, Libraries, and Health Care Providers

DISCUSSION

Issues addressed above have particular significance to this section. While there are many technological developments that continue to enhance the capability of standard telephony, signaling and switching (e.g. compression technologies, digital switching), the full value of telecommunications and networking will not be realized unless schools and libraries can operate at relatively high line speeds and move large volumes of information. Effective interactive, multimedia teleconferencing and distance learning applications (especially video-based applications) require telecommunications capacities that, under any definition, would be considered as advanced in nature.

The following functional applications are provided to define the types of "advanced" services that should be considered for schools and libraries:

- High speed circuits for data transmission, e.g. Frame Relay, ATM, ADSL.
- Videoconferencing/teleconferencing (satellite and terrestrial):
  - One-way video, two-way audio
  - Two-way video, two-way audio
  - Point-to-point and multipoint
  - Multimedia
  - Collaborative
- Video on demand.
- Interactive multimedia (voice, data, and video combined)--e.g. distance learning, case management service, and consultations.
- Internet-based activities (at the level of graphical interfaces such as the World Wide Web).
- Adaptive customer premises equipment interfaces for persons with disabilities (some interfaces are bandwidth and volume sensitive).

RECOMMENDATIONS

o Part of the basic or "core" service requirements to be established should include a

requirement to provide access to broadband telecommunications capacities, if requested, by schools and libraries. All telecommunications providers should be required to provide local loop access or "bandwidth-on-demand" access to high speed, switched broadband telecommunications capabilities that enables users to send and/or receive voice, data (including high resolution graphics), and video. The key objectives with respect to ensuring access to broadband capacities are to allow for the *interconnection* and *interoperation* of educational organizations at a level that is sufficient to support applications for learning and information access (such as those described above) that will produce measurable improvements in educational performance and in efficiencies in the delivery of services.

- With respect to suggestions regarding competitively neutral rules to effect access to "advanced" services, all companies electing to provide "core" services to schools and libraries should be required to provide connectivity to "advanced" services and to ensure the capability to interconnect and interoperate with other carriers who are serving schools and libraries at the same level or similar level of service.
- The "advanced" services addressed in Section 254(h)(2) should be at least identical to, if not broader in scope, than those supported under Section 254(h)(1).
- With respect to measures other than discounts and financial support that should be considered to promote deployment of "advanced" services to schools, we ask consideration be given to the mechanisms suggested in our legislative proposal, Technology in Education Act of 1996 (attachment B). Our proposal attempts to introduce a market aggregation strategy for negotiating substantial discount rates with telecommunications providers serving the educational market. Volume purchase of standardized, consumer-specified telecommunications services that are supported through consistent, sustainable funding methodologies will provide great leverage with respect to negotiating with providers. This concept will be developed in more detail as more information is obtained with respect to the specific recommendations received by the Joint Board from other educational associations and user groups.
- Please refer to remarks provided in relation to Section IV of this submission in terms of the issues of resale of services. In summary, the same principles adopted for resale of services related for "core" and "special" services should pertain to "advanced" services.

Sections VI - X - We have no comments on these sections.

Sincerely,

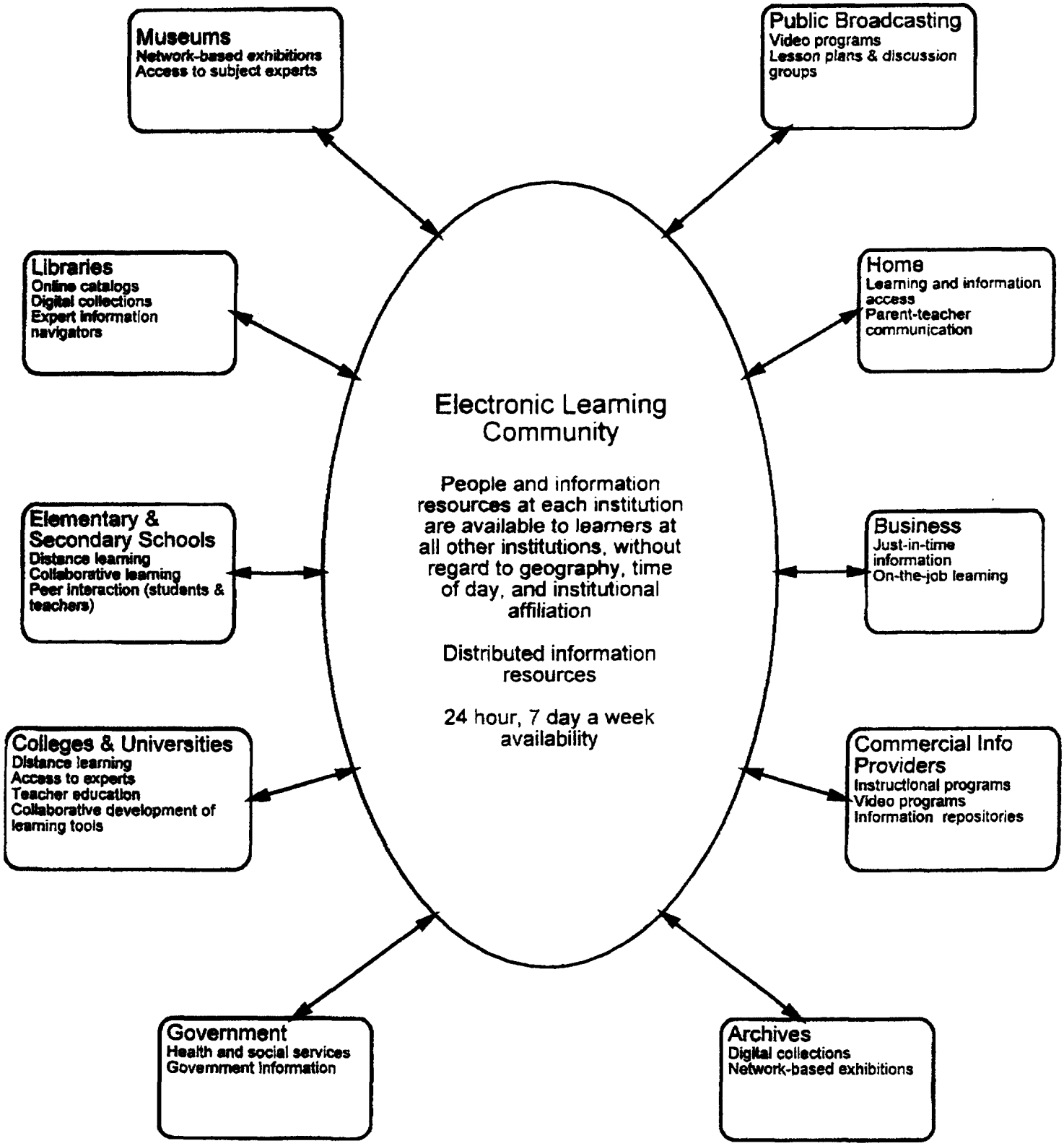
Thomas E. Sheldon

Attachments

Attachment A

ELECTRONIC LEARNING COMMUNITY

Using Networks to Integrate the Resources of the University of the State of New York



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Executive Summary of the Omnibus Technology in Education Act of 1996
HP-12

Purpose of bill:

This bill establishes new fiscal resources and amendments to current education and public authorities law that are necessary to develop an electronic community for learning, teaching, research, and information access throughout New York State. The electronic learning community will provide the means by which every New York State student, from kindergarten through graduate school, every teacher, librarian, researcher, administrator -- indeed, all residents -- will have full and equitable access to a new technology-rich learning and information environment. As a result, new opportunities will be created for all of the State's citizens for enhanced learning and teaching, improved economic productivity, increased access to government the democratic process, and an enhanced quality of life.

Specifically, this omnibus bill provides for the essential components of the new electronic learning environment: long-term funding to support the infrastructure of the network; a financing plan that will provide equitable access to all of the State's educational resources, with a special emphasis on those institutions with the least ability to pay; in-service training for all education and research professionals; development of technology-rich applications that will support the restructuring of the design and delivery of educational opportunity where technology is infused in every part of the curricula and the learning experience - including the home and the workplace; and a framework for the joint management and support of the network and its resources by all members of the State's education and research communities.

Summary of the provisions of the bill:

Electronic Learning Community Connectivity Initiative. Authorizes the Commissioner of Education to award grants to telecommunications providers for services and expenses related to the establishment and maintenance of two-way, interactive broadband connections to the Internet and other broadband networks for all eligible public and nonpublic K-12 schools, colleges and universities, libraries and library systems, public broadcasting corporations, and selected cultural institutions, with sufficient, scalable bandwidth for major education and research applications.

The connections are to be phased in over a five year period, at which time nearly 7,000 institutions in New York State will have meaningful network access. Funds for connections will flow to the telecommunications providers via the State's ten Economic Development Regions. This will ensure statewide geographic equity in the distribution of funds.

The funds under this provision apply to the annual telecommunications costs; that is, they do not apply to any infrastructure or equipment costs. In addition, the State share of these costs will decrease 10% every year until year 6, at which time the state and local contributions will be shared equally at 50%.

"High Cost" Connectivity Fund. Provides, if necessary, support for the connection of specific institutions to broadband telecommunications networks where there are connectivity limitations caused by an inadequate telecommunications infrastructure. This reserve fund is created to cover additional connection costs for those institutions in economically depressed or rural areas where the physical infrastructure cannot support the new connections of sufficient capacity.

Professional Development Fund. Establishes a new State program to help finance in-service training in the use of telecommunications and related information technologies for teachers, librarians, and other education professionals, including school board members and library trustees where appropriate. This is a critical component of the overall plan; namely, to prepare and sustain education and information professionals in using network technology. This program will supplement local staff development programs. No connectivity grant will be awarded unless a training plan is in place.

Technology Aid for Computer Hardware, Software, and other Equipment for Networking. This section of the bill, a companion to the Electronic Learning Community Connectivity Initiative, provides funds for the acquisition of facility-level telecommunications equipment, cabling, and workstations with an initial capacity that would give these institutions full Internet access, including the ability to run multimedia applications. This is a one-time cost for a LAN connection and one or two workstations (depending on the kind of institution).

Building Aid for Technology and Telecommunications Network Infrastructure Development for Schools, Libraries and Library Systems, and Cultural Institutions. Allows K-12 schools to use building aid for the purchase of such networking equipment and computer hardware for all classrooms, school library media centers and other school facilities, as appropriate, without any restriction with respect to computer lab configuration. These Building Aid provisions differ from the Technology Aid program in that they permit the use of existing funds to develop the overall infrastructure of the premise as opposed to the initial network connection point.

This section of the bill will also amend Education Law to provide for up to 50% of the costs for wiring or cabling, networking, purchase of equipment and hardware, and capital construction projects for libraries and library systems that enhance telecommunications and technology infrastructure and capacity. This amendment also adds reference and research library resources systems as eligible recipients of construction funds for the purpose of technology enhancement.

This section of the bill will also add a new section to the Education Law to provide grant funds to cultural institutions and public broadcasting corporations for cabling, networking, purchase of networking equipment and computer hardware and capital construction projects that enhance telecommunications and technology infrastructure and capacity. The concept of building aid is being extended for libraries and cultural institutions because they are primary sources of information resources on the network and therefore deserve State support.

Special Building Aid for Technology for Low Wealth Districts and Libraries. Establishes a separate aid category to provide supplemental support to elementary and secondary schools that have a demonstrable need for additional capital construction funding.

This bill will also add a new section to Education Law to establish a separate aid category for library construction to provide supplemental funds for those libraries that have a demonstrable need for additional capital construction funding.

This bill would also provide a new section of the Education Law establishing a separate aid category for competitive grants to cultural institutions to provide supplemental funds to those cultural institutions that have a demonstrable need for additional construction funding.

Expanded New York State Dormitory Authority Financing for Telecommunications Infrastructure Development for K-12 Schools, Library Systems, Libraries, and chartered Museums. Amends the public authorities law to authorize the Dormitory Authority to finance and construct facilities for K-12 schools and public libraries and to rehabilitate and install telecommunications infrastructure for public library systems and reference and research resources systems, libraries, and museums. Currently the DA can issue bonds for higher education institutions. This provision simply extends this authority to schools, libraries, and museums..

Statewide Learning Resources Acquisition Aid. Adds a new section to the Education Law to authorize the Commissioner of Education to negotiate and obtain statewide licenses for acquisition of instructional computer software and information services.

Innovation Fund for Education, Research, and Information Access Applications. Authorizes the Commissioner of Education to establish guidelines and a mechanism for a competitive grant program that will provide funds to colleges, universities, library systems, and public broadcasting corporations for the development of innovative network educational resources and services with statewide applicability. In addition, this bill authorizes the Commissioner of Education to establish an application Innovation Fund within the Department as a special revenue account. This provision establishes a legitimate role for the State to seed initial development of applications on the network.

Regional Technology Study Grants. Provides the Commissioner of Education with the authority to grant funds to support the development of long-range technology planning and telecommunications network development within economic development regions. This provision supports an initial planning effort on the part of all educational institutions in a region to coordinate educational programs and develop new applications such as distance learning. The intent here is to coordinate development of the resources and services on the network.

Educational Technology and Educational Network Advisory Boards. Authorizes the Commissioner of Education to appoint two advisory boards to advise and assist the Commissioner and the Board of Regents on the implementation of all the provisions of the Omnibus Technology in Education Act.

The Educational Technology Board shall in include representatives of all sectors of the University of the State of New York, the Governor, and the Legislature. It will advise on educational issues relating to the implementation of this act, with a particular empahasis on how educational applications and informational resources should be deployed in the Electronic Learning Community.

The Educational Network Advisory Board shall be consist of experts in the area of information technology, especially telecommunications and networking. Its function shall be to advise on the critical technical issues that need to be addressed so that the Electronic Learning Community can evolve in a technically sound direction in accordance with prevailing industry standards.

Task Force on Access of Nonpublic School Students to Instructional Computer Hardware and Networking Equipment. Directs the Commissioner to establish a task force to conduct a study and make recommendations to the Regents, the Governor, and the Legislature on constitutionally-permissible ways to assure that students in nonpublic elementary and secondary schools have the benefit of instructional computer hardware and networking equipment.

University of the State of New York
Service Sites, Professional Staff & Targeted Populations

	Number of School / Campus Sites	------ Staffing ------ Instructional	Other Professional	Targeted User Population
K-12 COMMUNITY				
Public Schools [716 school districts]	4,068	187,500	30,500	2,773,707
BOCES	38	6,611	2,399	
Non-public Schools	2,142	39,468	13,372	474,377
HIGHER EDUCATION				
Public colleges & universities 85 institutions	96	39,099	20,681	604,340
Independent & Proprietary 177 institutions	217	41,414	33,664	426,396
LIBRARIES & ARCHIVES				
Public libraries [including branches] 741 Libraries	1,180	n.a.	4,353	All Residents
Academic Libraries {1} 272 Libraries	[272] [co-located w/ higher ed. institutions]	n.a.	[2,843] [counted under Higher Ed]	1,165,594
School Libraries {2}				
Public schools	[4,091] [co-located w/ schools]	n.a.	[3,213] [counted under K-12]	3,000,717
Non-public schools	[2,141] [co-located w/ schools]	n.a.	[1,248] [counted under K-12]	527,217
Institutions [Mental, correctional, etc.]	213	n.a.	60	unknown
Medical {3}	197	n.a.	333	unknown
State Library / State Archives	1	n.a.	142	All Residents
Archives & Archival Collections	[1500]	n.a.	unknown	All Residents
Not associated w/ a library or museu	600	n.a.	unknown	
MUSEUMS	993	n.a.	8,459	All Residents
VESID {4}	16	n.a.	600	120,000
PUBLIC BROADCASTING				
Television Stations	9	n.a.	1,028	All Residents
Radio Stations	16	n.a.	207	All Residents
TOTAL	**9,786**	**314,092**	**115,798**	**18,197,000**
[To avoid double counting, figures in brackets are not used in the Totals]				All NYS Residents
		Total staff:	**429,890**	

Notes:

{1} Targeted Population includes staff and targeted population for Higher Education as noted above

{2} Targeted Population includes staff and targeted population for K-12 Community as noted above

{3} May overlap in part with academic libraries

{4} Vocational and Educational Services for Individuals with Disabilities unit within Education Dept.

n.a. = not applicable

19-Mar-96
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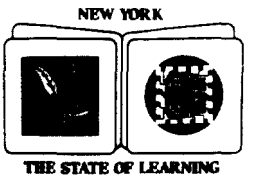
Attachment D



THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, N.Y. 12230

Office of Telecommunications
Policy Analysis and Development

July 7, 1995

Peter McGowan, Staff Counsel
Department of Public Service
3 Empire State Plaza
Albany, N.Y. 12223-1350

Dear Mr. McGowan:

Thank you for the opportunity to respond to the May 16 staff report, *Universal Service Issues*, Competition II, Module 1. Our priorities throughout all of the Competition II Proceedings continue to be: affordable rates, access to broadband services, public access points, the continued protection of universal service as a means to avoid information "haves" and "have nots," open architecture, interconnectivity of all telecommunications providers, and the eventual connection of the learning and information environment to the home and the workplace. We also want to emphasize that we continue to embrace the long-term strategy of deregulation, increased competition in the telecommunications markets, and open access to network services. Ultimately, these policies represent the best route to lower rates and increased services for education, research, and cultural institutions.

We still think, however, there are some short term issues that may need to be addressed within the Universal Service discussions. A truly competitive marketplace is still several years away, so some temporary provisions may need to be instituted. It is within this transitional phase that we think the PSC should maintain a level of regulatory authority to assist us in defining, implementing, and monitoring equity and access issues, including affordable, universal access to education and research networks, services, and resources.

In terms of the staff report, most of our concerns originate from staff's contention that definitions and provisions for universal service should be limited to voice grade residential telephone service - to the exclusion of protecting access to data grade services. It is evidently for this reason that most - if not all - of our original November 30 comments for this module were not referenced in the report. While we understand staff's rationale, we continue to be frustrated by this POTS limitation because it remains based on the 60 year old telephone infrastructure model. This old model and its attendant universal service provisions are no longer technologically appropriate with the advent of data networks accessed over the public switched network.. As a consequence, voice telephony is now only part of the public switched network. What used to be an analog voice network is now inexorably and irreversibly becoming a digital data network.

It is for this reason that network accessibility and affordable rates are so important to schools, libraries, colleges and universities, museums, and local governments. As long as local loop rates remain too high for these institutions that serve as information access points for learners and citizens, particularly those that are economically disadvantaged, it is certain that a large percentage of the population will be denied access to vital education and government information. We therefore recommend that the Commission acknowledge education's needs for access to the broadband network within the context of the discussion on page 7 of the draft report. As stated: "...as technology and markets change, the list of basic services should be reexamined to ensure that it meets the evolving customer needs". Further, we also recommend that it is still possible - and necessary - to define and interpret new definitions of universal service and access in the context of this new infrastructure. As stated earlier, until the telecommunications marketplace is truly competitive, it is the PSC's responsibility to protect the public interest with existing and new services.

Further, as staff correctly argued, issues dealing with discounted rates and broadband access have implications throughout the broader Competition II discussions, particularly in terms of defining the "level playing field." We therefore think that the staff report should acknowledge the importance of universal access to broadband as an issue to be addressed in Module 2 of these proceedings.

Within the context of the preceding discussion, we recommend that the final Universal Service recommendations provide an opportunity to continue discussions on several issues related to the "provisioning of broadband networks" for more ubiquitous access. We understand that these issues will not be part of Module 1, but, as we have argued, they are elemental to the educational purpose of providing access to information for all citizens. We also ask that all telecommunications industries -- including cable and IXC's -- be part of the dialogue. The expanded role of the PSC in cable regulation and policy may be germane to the discussion so we request that these issues be included in the discussion as well. Commission staff have coordinated various aspects of the Competition II proceeding through "collaborative meetings" so there are precedents for this request.

Specifically, we ask staff to establish a mechanism whereby exploratory discussions could begin on the possibility of integrating an "education lifeline" concept into telephony regulation and policy. Although the staff report implies that residential access to education services and resources does not now qualify as a "basic service," we think New York State should investigate how education and information access could take on a new meaning in terms of residential services. One of the many powers of the new computer and networking technologies is that they can provide access to education and public information resources from the home and workplace, freeing learning and information access from the confines of space and time. With these new technologies individuals, particularly disadvantaged individuals, will have the opportunity to use their telephone lines to access resources to improve their economic and social well-being -- just as they have depended on a "lifeline" service to support their health and safety needs. In short, we recommend the exploration with staff and telecommunications providers of the possible development of a universal voice-grade service for parents, students, and citizens that would

provide access to schools, libraries, and governments - regardless of the status of the phone service provided to these individuals or the location of the call. In effect, we envison a service similar to 911 where all individuals can have immediate access to educational resources and points of public information. We also think that data grade services should be made more universally accessible for most-in-need individuals in order to provide access to computer-based learning programs, services, and resources.

In addition, while we understand the staff position that affordable rates for education institutions such as schools, libraries, colleges and universities, and museums are not to be included in Universal Service priorities, we think that there is a strong possibility that Federal policy could invalidate New York's position. If, for instance, S. 652 or some similar Federal legislation becomes law, then it will be necessary for New York State to include affordable education rates as part of its universal service provisions. We therefore encourage the Commission staff to acknowledge this possibility in their discussion and we request that they solicit the input of the education community if Federal preemption becomes law. It is also our understanding, based on discussions with Federal officials, that states will have a right to expand the minimum federally mandated provisions of preferential rates so we request that Commission staff include this possible eventuality as part of the collaborative discussions.

Thank you very much for your consideration of these matters.

Sincerely,

Walker Crewson

Walker Crewson

cc: Acting Commissioner Thomas Sheldon
Regents Subcommittee on Telecommunications
SED Advisory Committee on Telecommunications - Regulatory Issues Workgroup

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NEW YORK
THE STATE OF LEARNING

THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, N.Y. 12230

DEPUTY COMMISSIONER FOR CULTURAL EDUCATION

October 24, 1994

Honorable John J. Kelliher
Secretary
Public Service Commission
State of New York
Three Empire State Plaza
Albany, New York 12223

Dear Mr. Kelliher;

The New York State Education Department respectfully submits comments to the Commission with respect to the proceedings of Case 94-C 0095 (Competition II). This letter encompasses initial comments related to the proceedings in general and to discussions conducted for Modules I (Universal Service) and II (Level Playing Field).

The comments submitted herein should not be considered as final or complete with respect to any of the components of this proceeding. Rather, these comments are points of reference for our involvement in the proceedings and a means for establishing a context for our continued participation. All comments are subject to the review and approval of the Board of Regents and the Commissioner of Education.

We have taken the opportunity that these hearings have presented to convene a workgroup of individuals representing all constituencies served by the University of the State of New York (USNY). This workgroup is assisting in the development of appropriate positions on the issues raised in these proceedings that are considered to be in the interests of the State's educational, research, library and cultural institutions. As the Commission may be aware, New York State's unique charter for USNY establishes the Board of Regents and the Commissioner of Education as the primary policy authority for all components of the State's educational system. The overarching policy framework of USNY provides an opportunity to exercise the Regents' responsibility to present a unified approach for using telecommunication to connect all segments of the education and research community of New York State and to assure equitable access to information and quality learning for all residents.

To achieve this objective we envision the establishment of substantial partnerships with the telecommunications industry to develop discount rate structures and technical assistance programs that will enable all USNY institutions to expand their use of telecommunications technologies to go beyond voice to high bandwidth digital capacities for serving their respective constituencies. We think that the providers will realize there are sound business principles involved in the establishment of an industry-wide educational tariff structure based on universal access and open architecture principles. Without question, the thousands of institutions comprising the University of the State of New York represent the largest non-residential customer base in the State. More than five million people are directly participating in educational and employment preparation programs in approximately 10,000 institutional sites, and nearly all of the State's residents benefit from the information and cultural services provided by library systems, cultural institutions and public broadcasting. All of these organizations and the individuals served will benefit from the expanded telecommunications capacities that will be built to support their interests and needs.

While the timeframes for the Competition II proceedings are necessarily short, we expect to work with the Commission on a long-term basis to insure that the principles of competition that are set in place can be implemented fairly for all of our constituencies. We expect that there will need to be continuous adjustments in tariffs and other regulatory mechanisms to insure the continued evolution of a network operating in a highly competitive market place. From the perspective of USNY the results of that competition should be expansion of use based on lower cost, improvements in quality and quantity of service, and improved equity access. We sincerely hope that in the interest of developing a competitive environment the resulting conditions for all to participate will not create price floors for services, place limitations on bandwidth, exacerbate current policies that maintain and encourage the disenfranchisement of certain populations, or create barriers to the evolution of the network.

In addition, many of the most effective applications of telecommunications for the education and research community will take us beyond the local exchange market. Distance learning projects, access to remote databases and information files, and the interconnection of institutions across the State all have implications for the development of agreements with providers that are outside of the jurisdiction of the PSC. With respect to our mutual responsibility for defining and serving the public interest, we intend to seek the advice of the PSC as to how we might best develop a policy framework for broadband applications, inter-LATA and inter-state connectivity that is consistent and closely articulated with the competition principles developed for the local exchange carriers.

Specific comments we have developed in response to the scoping paper developed by staff for Module I and specific comments to the draft recommendations developed by staff for Module II will be sent separately. Additional comments will be provided as needed, based on our continued involvement in the discussions for these modules.

In closing, we would like to acknowledge the excellent work of PSC staff in the conduct of these landmark proceedings. The expertise and diligence of this staff will be apparent in the quality of the recommendations forwarded to the Commission for action. Staff have also been exceptionally supportive of the involve ment of SED representatives in these discussions and have assisted us in every aspect of this work. We look forward to continuing this work and to the development of effective partnerships with all participants.

Thank you for your assistance.

Sincerely yours,

Walker Crewson

Walker Crewson

cc: Commissioner Thomas Sobol
Regents Subcommittee on Telecommunications
SED Advisory Committee on Telecommunications - Regulatory Issues Workgroup

NEW YORK
THE STATE OF LEARNING

THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, N.Y. 12230

DEPUTY COMMISSIONER FOR CULTURAL EDUCATION

November 30, 1994

Honorable John J. Kelliher
Secretary
Public Service Commission
State of New York
Three Empire State Plaza
Albany, New York 12223

Dear Mr. Kelliher:

The New York State Education Department respectfully submits comments to the Commission with respect to the proceedings of Case 94-C-0095 (Competition II). This letter provides general comments and specific recommendations for MODULE I (Universal Service). Additional comments and recommendations will be provided as discussion continues.

The comments submitted herein should not be considered as final or complete with respect to this module. All comments are subject to the review and approval of the Board of Regents and the Commissioner of Education. These comments should be considered within the context of general principles and issues advanced to you in my earlier letter dated October 24, 1994 which is based on a fundamental assumption that education and research play a key role in protecting public interests in these areas. These issues are summarized as follows:

- The State Education Department (SED) intends to advocate for improved telecommunications capacities for all institutions comprising the University of the State of New York (USNY) - namely, all public and nonpublic elementary and secondary schools, colleges and universities, libraries, museums, and other cultural organizations. As such, comments prepared for this module were developed in conjunction with a committee representative of all USNY constituencies.

- The SED intends to illustrate the aggregated market leverage represented by USNY and to advocate for educational discount rates for all USNY institutions.

- While we expect that the development of a highly competitive telecommunications market will eventually result in lower prices and higher quality service, we feel that the establishment of an educational tariff is essential in enabling USNY to fully participate in the broad range of electronic initiatives now underway in the local, state, national and international arenas.

- The regulatory process will continue to protect and strengthen provisions for universal access to telecommunication services (especially broadband services), and interconnectivity for all USNY institutions. We expect to establish a long-term relationship with the PSC to continue a dialogue on these issues and represent the interests of education and research in the development of the new regulatory structure for the local exchange market.

Within the context of the above, I offer the following comments and recommendations for Module I (Universal Service).

Regulatory requirement for Universal Access Provisions:

The State Education Department urges that universal service requirements continue to be paramount considerations for serving the local exchange market and that these principles be applied consistently to all providers that enter that market. In addition to universal service provisions, there are issues related to universal access that must be addressed. Specifically, any provider serving a local exchange market must be required to provide access to all services including broadband by all classes of users, especially USNY institutions. The development of "niche" markets or special classes of services that are not accessible due to either technical or economic limitations may place at a disadvantage many educational institutions for which these services may present a virtual "lifeline" to constituencies served. We urge the Commission to establish a regulatory requirement to protect access to all services.

"Basic Service" Provisions:

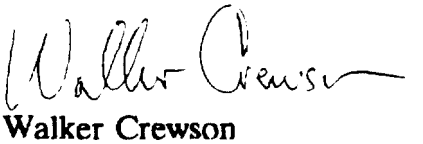
In reviewing Principle 2 of the Competition II-Universal Service Module I scoping paper, the education and library communities agree that basic service has not been equitably achieved. It is essential, however, that any continuing discussion of future "basic services" consider assurances that provide ubiquitous access to education and research institutions for programs and services that are telecommunications-based. The list of basic services considered and discussed within the proceedings are necessary, but not sufficient for many USNY institutions. In addition to the basic services provisions listed on page 9 of the scoping paper, all telecommunications providers should be required to have the capacity to provide access to scalable bandwidth (at affordable additional cost) that would provide all USNY institutions with:

- Ubiquitous Internet connectivity,
- Pathways to broader bandwidth services, including ATM, ISDN and analog video,
- Public access points (such as libraries and government offices) that provide general access to broadband services in addition to voice.
- Seamless "data grade" services.
- Provision of electronic access to educational and rehabilitative programs and services by persons with disabilities.

Within the discussions of basic service in this module, there were significant issues raised by the providers with respect to "stranded investment" costs that must be recouped by incumbent providers. While this issue is of major concern to the incumbent providers, the Department is not convinced that these costs have been sufficiently substantiated to support recoupment. If the Commission substantiates any costs, we further suggest that they be factored out of services provided to USNY and considered as incentives for discount rates.

Access to wide area network services, such as shared Internet points of presence, should be considered as requirements for telecommunication providers serving local exchange markets. Opportunities to make local phone calls from multiple sites for information access, inter-lata and interstate connectivity will provide opportunities for USNY to increase use of these services at lower per unit costs.

Sincerely yours,



Walker Crewson

cc: Commissioner Thomas Sobol
Regents Subcommittee on Telecommunications
SED Advisory Committee on Telecommunications - Regulatory Issues Workgroup

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THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, N.Y. 12230

Office of Telecommunications
Policy Analysis and Development

November 30, 1994

Honorable John J. Kelliher
Secretary
Public Service Commission
State of New York
Three Empire State Plaza
Albany, New York 12223

Dear Mr. Kelliher:

The New York State Education Department respectfully submits comments to the Commission with respect to the proceedings of Case 94-C-0095 (Competition II). This letter provides general comments and specific recommendations for MODULE 2 (Level Playing Field). Additional comments and recommendations will be provided as discussions continue.

The comments submitted herein should not be considered as final or complete with respect to this module. All comments are subject to the review and approval of the Regents and the Commissioner of Education. These comments should be considered within the context of general principles and issues advanced to you in my earlier letter dated October 24, 1994 which is based on a fundamental assumption that education and research play a key role in protecting public interests in these areas. These issues are summarized as follows:

- The State Education Department (SED) intends to advocate for improved telecommunications capacities for all institutions comprising the University of the State of New York (USNY) - namely, all public and nonpublic elementary and secondary schools, colleges and universities, libraries, museums, and other cultural organizations. As such, comments prepared for this module were developed in conjunction with a committee representative of all USNY constituencies.

- The SED intends to illustrate the aggregated market leverage represented by USNY and to advocate for educational discount rates for all USNY institutions.